

Application No. 09/186,810

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substrate associations, wherein the crosslinking agents comprise at least two aldehyde functional groups that form covalent bonds to link the crosslinking agent directly with the polypeptide growth factor and the substrate, the polypeptide growth factor associated with the substrate being effective to stimulate association of viable cells with the substrate, and the substrate.

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3. (Amended) The biomedical device of claim 1 wherein the crosslinking agent comprises difunctional aldehydes.

4. (Amended) The biomedical device of claim 3 wherein the difunctional aldehyde comprises glutaraldehyde.

8. (Amended) The biomedical device of claim 1 wherein the substrate comprises tissue.

9. (Amended) The biomedical device of claim 1 wherein the substrate comprises human tissue.

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10. (Amended) The biomedical device of claim 1 wherein the substrate is selected from the group consisting of porcine tissue, bovine tissue, kangaroo tissue, canine tissue and a combination thereof.

11. (Amended) The biomedical device of claim 1 wherein the substrate comprises a synthetic substrate.

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12. (Amended) The biomedical device of claim 1 wherein the substrate comprises a bioresorbable material.

13. (Amended) The biomedical device of claim 1 wherein the polypeptide growth factor comprises vascular endothelial growth factor.

14. (Amended) The biomedical device of claim 1 wherein the polypeptide growth factor comprises Tat protein.

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15. (Amended) The biomedical device of claim 1 wherein the biomedical device comprises an artificial organ, a heart valve prosthesis, an annuloplasty ring, a stent, a pledget, suture, an electrical lead, a permanently in-dwelling percutaneous device, an AV shunt, a vascular graft, a dermal graft or a surgical patch.

16. (Amended) A method for associating endothelial cells with a substrate, the method comprising contacting a biomedical device of claim 1 with a cell culture comprising endothelial cells.

17. (Amended) A method for distributing a medical article for use by health care professionals, comprising placing a biomedical device of claim 1 into a package under sterile conditions and distributing the package for use by health care professionals.

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28. (Twice Amended) A biomedical device comprising a biocompatible substrate and a polypeptide growth factor associated with the biocompatible substrate, the polypeptide growth

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factor being effective to stimulate association of viable cells with the substrate, wherein the polypeptide growth factor comprises Tat protein.

29. (Amended) The biomedical device of claim 28 wherein the biocompatible substrate comprises tissue.

30. (Amended) The biomedical device of claim 28 wherein the biocompatible substrate comprises a synthetic material.

31. (Amended) The biomedical device of claim 28 wherein the substrate comprises a bioresorbable material.

32. (Amended) The biomedical device of claim 28 wherein the polypeptide growth factor is bonded to the substrate with a crosslinking agent.

33. (Amended) The biomedical device of claim 28 further comprising an adhesive, the adhesive being associated with the polypeptide growth factor and the substrate.

34. (Amended) A biomedical device comprising a substrate and a polypeptide growth factor associated with the substrate by antibody-antigen associations, specific binding protein-receptor associations or enzyme-substrate associations, the polypeptide growth factor associated with the substrate being effective to stimulate association of viable cells with the substrate.

35. (Amended) The biomedical device of claim 34 wherein the biocompatible substrate comprises tissue.

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36. (Amended) The biomedical device of claim 34 wherein the biocompatible substrate comprises a synthetic material.

37. (Amended) The biomedical device of claim 34 wherein the substrate comprises a bioresorbable material.

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38. (Amended) The biomedical device of claim 34 wherein the polypeptide growth factor is associated with the substrate by antibody-antigen associations.

39. (Amended) The biomedical device of claim 34 wherein the polypeptide growth factor is associated with the substrate by specific binding protein-receptor associations.

40. (Amended) The biomedical device of claim 34 wherein the polypeptide growth factor is associated with the substrate by enzyme-substrate associations.

REMARKS

Claims 1, 3, 4, 8-17 and 28-40 are pending. By this Amendment, claims 1, 3, 4, 8-17 and 28-40 are amended. Specifically, the preamble of the claims have been amended for clarity. The amendment of the claims is not intended to narrow the claim scope. The amendment of the preamble is supported by the specification, for example, at page 7, line 26. No new matter is introduced.